

Structural Analysis of Kerosene of Bavlly
(Tatar ASSR) Petroleum

77548
SOV/65-60-2-5/15

<u>Name of group</u>	The amount present in kerosene fraction (lr. %)
Normal paraffins	15
Isoparaffins	23
Monocyclic naphthenes	12
Bicyclic naphthenes, including polycyclic	13
Monocyclic aromatic hydrocarbons	13
Bicyclic hydrocarbons, including polycyclic	3
Aromatic sulfides	3
Cyclic sulfides (mono-, bi-, and tricyclic thiophanes)	3
Tarry residue	1.4

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Structural Analysis of Kerosene of Bavl
(Tatar ASSR) Petroleum

77548

SOV-65-60-2-015

(Continued from card 2/4 .

Uninvestigated hydrocarbons	1.5
Residue from distillations	2
Losses	<u>10.1</u>
Total	100

Aromatic sulfides and thiophanes (about 1:1) comprise more than 7.5% of the kerosene fraction from Bavl petroleum. The kerosene fraction investigated is characterized by a high percentage of monocyclic aromatic hydrocarbons, a small amount of bicyclic aromatic hydrocarbons, and a comparatively large amount of thiophanes. There are 2 figures; and 16 references, 14 Soviet, 2 U.S. The 2 U.S. references are: Mair, B. J., Marenlatis, W. J., Rossini, F. D., Anal. Chem ,

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Structural Analysis of Kerosene of Bavlly
(Tatar ASSR) Petroleum

77548
SOV/65-60-2-8/15

Nr 1, 92, Jan., 1957; Rossini, F. D., Selected Values
of Physical and Thermodynamic Properties of Hydrocarbons
and Related Compound, API Cornedgle Press, Pittsburgh,
1953.

ASSOCIATION: Kazan' Branch of the Academy of Sciences of the
USSR (Kazanskiy filial AN SSSR)

Card 4/4

VIPOBYANTS, R.A.; BOZHAYEV, I.A.; SHILYAY, N.S.

Synthesis of mifolone. Chem. zhurn. 37 no.8:1851-1854
Ag '64. (MIRA 17:11)

1. Kazanskij Institut khimicheskoy fiziki AN USSR.

VIROBYANTS, R.A.; MARTYNOV, A.A.

Use of a differential thermocouple in the ebullioscopic determination of the molecular weight of petroleum products. Khim.i tekhn. topl.i masel 6 no.1:57-61 Ja '61. (MIRA 14:1)

1. Khimicheskiy institut Kazanskogo filiala AN SSSR.
(Petroleum products) (Molecular weights)

AUTHOR: Gerasimov, A. M., Izmay, V. A., Vasyunov, R. A.

TITLE: High-degrees of polymerization of ethylene with nickel

SOURCE: Neftekhimiya, v. 4, no. 5, 1964, p. 1009

TOPIC TAGS: alkylation, aromatic hydrocarbon, catalysis, calcium, argon

Chemistry AN SSSR

SUBMITTED: 06Feb64

NO REF SOVI 005

Card 1/1

Chemistry
O'Brien, J.

RECEIVED: 17 Feb 64
JPRS

OKRUZHNOV, A.M.; IZMAYLOV, R.I.; VERONYANS, R.A.

Hydrodealkylation of toluene and ethylbenzene on a γ -Al₂O₃ zeolite containing nickel. *Neftokhimiya* 4 no.5:676-679 5-0 '64.

(MIRA 1844)

I. Institut organicheskoy khimii AN SSSR, Kazan'.

IZMAYLOV, R.I.; OKRUZHNOV, A.M.; FEDOROV, G.I.; VIROBYANTS, R.A.

Thermocatalytic conversions of hydrocarbons of a petroleum
C₆-fraction on Al₂O₃-Pt catalyst. Neftekhimiya 1 no.4:505-
508 J1-Ag '61. (MIRA 16:11)

1. Institut organicheskoy khimii AN SSSR, Kazan'.

ZRELOV, Vsevolod Nikolayevich; KICHKIN, Grigoriy Ignat'yevich;
VIROBYANTS, R.A., retsenzent; MAZITOVA, F.A., retsenzent;
ORLOVA, Kh.Ya., retsenzent; YENISHERLOVA, O.M., ved. red.;
KREYN, S.E., prof., doktor tekhn.nauk, red.; POLOSINA, A.S.,
tekhn. red.

[Chromatography in the petroleum and petrochemical industries]
Khromatografiia v neftianoi i neftekhimicheskoi promyshlen-
nosti. Pod red. S.E.Kreina. Moskva, Gostoptekhizdat, 1963.
287 p. (MIRA 17:1)

(Petroleum industry) (Petroleum chemicals)
(Chromatographic analysis)

MAZITOVA, F.N.; VIROBYANTS, R.A.; YERMAKOVA, S.K.

Analysis of light petroleum hydrocarbons by means of gas-liquid chromatography. Izv. AN SSSR. Otd. khim. nauk no. 9: 1546-1550 S '62. (MIRA 15:10)

1. Institut organicheskoy khimii AN SSSR, Kazan'.
(Hydrocarbons) (Gas chromatography)

VIROBYANTS, R.A.; NECHAYEVA, M.A.; GONIK, V.K.

Structural group composition of aromatic hydrocarbons of the
kerosine fraction of Bavly petroleum. Izv.Kazan.fil. AN SSSR.
Ser.khim.nauk no.6:93-100 '61. (MIRA 16:5)
(Bavly region--Petroleum) (Hydrocarbons)

VIROBYANTS, R.A.; AMIRKHANOVA, N.G.; MARTYNOV, A.A.; NECHAYEVA, M.A.;
GONIK, V.K.

Chemical composition of Bavly petroleum kerosines. Izv. Kazan. fil.
AN SSSR. Ser. khim. nauk no. 6:101-115 '61. (MIRA 16:5)
(Bavly region—Petroleum—Analysis) (Kerosine)

IZMAYLOV, R.I.; OKRUZHNNOV, A.M.; VIROBYANTS, R.A.

Volga crudes as a raw material for the production of benzene by catalytic reforming. Khim.i tkeh.topl. i masel 7 no.11:29-32 N '62. (MIRA 15:12)

1. Institut organicheskoy khimii AN SSSR, g. Kazan'.
(Petroleum—Refining) (Benzene)

MAZITOVA, F.N.; YERMAKOVA, S.K.; VIROBYANTS, R.A.

Analysis of gaseous hydrocarbons by adsorption chromatography
on aluminum oxide. Khim.i tekhn.topl.i masel 7 no.4:66-69 Ap
'62. (MIRA 15:4)

1. Institut organicheskoy khimii AN SSSR, g. Kazan'.
(Hydrocarbons) (Gas chromatography)

S/081/62/000/006/068/117
B149/B108

AUTHORS: Virobyants, R. A., Nechayeva, M. N., Rusetskaya, G. M.,
Gonik, V. K., Amirkhanova, N. G.

TITLE: Sulfur and organic sulfur compounds in the kerosene and
solar oil fractions of petroleum from the Tatarskaya ASSR

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 527, abstract
6M134 (Sb. "Khimiya seraorgan. soyedineniy, soderzhashchikh
v neft'yakh i nefteproduktakh. v. 4", M. Gostoptekhizdat,
1961, 113 - 120)

TEXT: The content and nature of organic sulfur compounds (SC) in the
kerosene and solar oil fractions of petroleum in the carbonaceous
Bavlinskoye deposits and in the Devonian deposits (D_I - D_{II}) in the
Minnibayevo area of the Romashkino deposits were determined. The SC were
isolated chromatographically on silica gel and Al_2O_3 with subsequent
elution with petroleum ether, CCl_4 , benzene, and ethanol. The sulfur
content in the isolated fractions was determined and their ring structure
Card 1/2

Sulfur and organic sulfur compounds ...

S/081/62/000/006/068/117
B149/B108

calculated from specific dispersion and molecular weight data by the Martin and Sankin method. The structural groups isolated from the Bav-linskoye kerosene were vacuum-fractionated with collection of 5% by volume. Chromatographing of the SC concentrate on Al_2O_3 made it possible to isolate fractions with n_D^{20} 1.49 - 1.52 and d_4^{20} 0.93 - 0.97, sulfur content 13.8 - 11.7%, which corresponds to 70 - 80% of SC. The SC content of the kerosene-solar oil fractions of Devonian petroleum deposits varies from 2 to 15% and of carbonaceous deposits from 7.5 to 22%. The SC concentrates isolated from the kerosene-solar oil fractions are of two types: one corresponds to aromatic sulfides (I), the other to thiophanes (II). The ratio of I to II in Devonian petroleum is about 6:1 and in carbonaceous petroleum about 1:1. [Abstracter's note: Complete translation.]

Card 2/2

COUNTRY : POLAND
 CATEGORY : Cultivated Plants. M
 Grains. Legumes. Tropical Cereals.
 ABS. JOUR. : RZhBiol., No. 3, 1959, No. 10915
 AUTHOR : Virion, J.
 INST. : -
 TITLE : Breeding Corn by Inbreeding Method in Czechoslovakia.
 ORIG. PUB. : Postepy nauk roln., 1957, 4, No. 3, 127-135.
 ABSTRACT : Seven stations are engaged in corn breeding. The principal seed-growing work is conducted at the stations in Lednitsa and Topol'niki. In Lednitsa, the work with the hybrids of various strains is conducted according to the following scheme. Among the strains, there is carried out the self-pollination of the best plants in the amount of 300-300 and afterwards, the reproduction of these strains in isolated space. In the 4th year, there are obtained the single cross hybrids and in the 5th - the double cross

CARD: 1/4

COUNTRY :
 CATEGORY :
 RES. JOUR. : PchPich., No. 1959, No. 10915
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : For the starting material, the work of breeding is usually based on F_2 hybrids. In the first year, there are selected from here 200-300 separate plants which are self-pollinated on one hand and, on the other hand, are crossed with the strain which serves as the test. In the second year, there is performed in the breeding nursery the second self-pollination of 5 plants each within the inbred strains obtained. In the third year, 5 plants each from the remaining 30-40 strains are again self-pollinated and crossed simultaneously with the starting strain. In the fourth year, the self-pollination of the best plants is

CARD: 2/4

COUNTRY :
CATEGORY :

ABS. JOUR. : Fizbiol., No. 1259, No. 10915

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : repeated. It is reproduced in isolated space and is used as the material for the production of hybrid varieties in seed growing. American inbred strains were successfully used as the primary starting material for the production of hybrid corn. In Topol'niki, the breeding is conducted on the foundation of populations of varieties according to the following procedure: in the first year, 100-120 plants are self-pollinated from which 15-20% are afterwards rejected. In the second year the self-pollination is per-

CARD: 3/4

COUNTRY :

CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No. 10915

AUTHOR :

INST. :

TITLE :

ORIG. PUB. :

ABSTRACT : formed in the nursery having about 90 strains from which about 10 are discarded and in each of the remaining ones there is again performed the self-pollination in 3-4 plants. From the progeny obtained, there are kept only about 70% of the best ones. In the third year, there is conducted the maintenance of the remaining 60-70 strains and the simultaneous crossing of them with two test strains. In the fourth year, after the morphological inspection, there remain about 50 strains which are again sorted out on the basis of the trial of their hybrids with the test strains. — A. I. Kuptsov

CARD: 4/4

VIROB'YEV, S.I.

Treatment of pulmonary tuberculosis with phthivazide. Probl. tuberk.,
Moskva no.4:61-65 July-Aug 1953. (CIML 25:4)

1. Of Otdykh Tuberculosis Sanatorium VTsSPS No. 2 (Head Physician --
A. R. Piletskiy: Scientific Supervisor -- Prof. V. A. Ravich-Shcherbo,
Corresponding Member AMS USSR).

L 38174-66 EWT(m)/T/EWP(t)/ETI IJF(c) DJ/JD/JG

ACC NR: AP6021080

(N)

SOURCE CODE: UR/0365/66/002/002/0221/0226

AUTHOR: Virolaynen, E. I.; Kaybiyaynen, L. K.

ORG: Petrozavodsk State University im. O. V. Kuusinen (Petrozavodskiy gosudarstvennyy universitet)

TITLE: The effect of ultrasonic fields on the structure of electrolytic chrome deposits

SOURCE: Zashchita metallov, v. 2, no. 2, 1966, 221-226

TOPIC TAGS: electroplating, chrome, ultrasonic field, x ray diffraction study, metallographic examination, microhardness, temperature dependence, METAL COATING, ELECTROLYTIC DEPOSITION, ULTRASONIC FIELD

ABSTRACT: An x-ray analysis of the structure of electrolytic Cr deposits (80 μ thick) produced under the influence of ultrasonic fields was made. Electrodeposition took place in a solution containing 225-300 g/l of CrO_3 , 20 g/l of K_2SiF_6 and 6 g/l of SrSO_4 at current densities ranging from 30 to 150 a/dm² and temperatures from 25 to 80°C. A Mo tube (zirconium filter) was used to produce x-ray data. Micrographs ($\times 170$) showed that ultrasound increased the surface lustre and homogeneity of the coating. By chrome plating at lower temperatures (below 35°C) in an ultrasonic field having a strength of ~ 1 watts/cm² and a frequency of 20 kilocycles/sec, the microhardness of the deposits increased 35% as a result of an increase in the amount of Cr with

UDC: 621.357.7:543.8

Card 1/2

L 38174-66

ACC NR: AP6021080

a hexagonal structure. The hexagonally modified Cr caused microdistortion in the deposit. Its thermal stability was extremely low: annealing at 150°C for 2 hrs caused complete transition of the hexagonal structure into the more stable body-centered cubic phase. Electrodeposition in an ultrasonic field at high temperatures (above 35°C) resulted in an insignificant increase in coating hardness, caused by the increased dispersity of the coatings since the amount of microdistortion remained constant. The low thermal stability precluded any potential application in which the hard coatings could be utilized to supply wear resistance. It is concluded that ultrasonic chrome plating is unfeasible for most industrial applications. Orig. art. has: 4 figures.

SUB CODE: 11,14/

SUBM DATE: 08Jul65/

ORIG REF: 005/

OTH REF: 005

Card 2/2

VIRON, Ye.I.

Republic school of the mechanization and automation of technological
processes in the woodworking industry. Bum. 1 der. prom. no.2:55-56
Ap-Je '63. (MIRA 17:2)

SLYUSARENKO, V.A., red.; KRUPENCHIK, B.B., red.; MELESHKIN, M.T., red.; VIRON, Ye.M., red.; KUVALDIN, D.A., red.; VITVITSKIY, M., red. izd-va; SYCHEVSKIY, I., red. izd-va; NEDOVIZ, S., tekhn. red.

[First Soviet firms; from the work practice of the production combines of the Lvov Economic Council] Pervye sovetskie firmy; iz opyta raboty proizvodstvennykh ob"edinenii L'vovskogo sovnarkhoza. L'viv, Knyzhkovo-zhurnal'ne vyd-vo, 1962. 113 p. (MIRA 16:4)

1. Sekretar' L'vovskogo oblastnogo komiteta Kommunisticheskoy partiy Ukrainy (for Slyusarenko). 2. Zaveduyushchiy promyshlennym otdelom oblastnogo komiteta Kommunisticheskoy partii Ukrainy (for Krupenchik). 4. Nachal'nik proizvodstvenno-tekhnicheskogo upravleniya L'vovskogo sovnarkhoza (for Meleshkin)

(Lvov Economic Region--Business enterprises)

GRUNCHAROVA, D., inzh. (Ruse); MINEV, M. kh., inzh. (Ruse); ZLATEV, St., inzh. (Ruse); VIRONOV, G. inzh. (Ruse); OBRESHKOVA, G., inzh. (Ruse)

Manufacture and control of asbestine friction products in Bulgaria.
Mashinostroene 11 no.4:33-34 Ap '62.

VIROTCHENKO, I.I.; KOKAR', I.N.; TAGER, A.R.

Soundproofing a mill. TSement 28 no.3:19-20 My-Je '62.
(MIRA 15:7)

1. Volkhovskiy alyuminiyevyy zavod.
(Milling machinery--Soundproofing)
(Cement plants--Equipment and supplies)

VIROZUB, I.D.;SERGIYENKO, T.M.

Method of progressive increase of intracranial pressure in continuous experiment in animals. Vopr. neurokhir. 16 no.6:50-52 Nov-Dec 1952.

(GLML 23:4)

1. Senior Scientific Associates. 2. Of the Scientific-Research Institute of Neurosurgery (Director -- Prof. A. I. Arutyunov) of the of the Ministry of Public Health Ukrainian SSR.

VIROZUB, I.D.; DUKHIN, A.L.; SERGIYENKO, T.M.

On A.D. Dinaburg's article "Clinical and physiological characteristics of the hypertensive syndrome in supratentorial tumors of the brain".

Vopr. neirokhir. 21 no.2:30-32 Mr-Apr '57

(MLRA 10:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut neyrokhirurgii.
(BRAIN NEOPLASMS, compl.
hypertension in supratentorial tumors, clin. aspects)
(HYPERTENSION, etiol. and pathogen.
supratentorial tumors of brain)

VIROZUB, I. D.

32784. O pnevmografii pri nadtentorial'nykh opukholyakh. Trudy kievsk, nauch.-issled. Psikhonevroi. in-ta, T. XII, 1949, s. 85-93. 213-15

80: Letopis Zhurnal'nykh Statey, Vol. 44, Moskva, 1949

S/526/62/000/024/007/013
D234/D308

AUTHORS: Virozub, I.O., Horbatyy, Yu.P., Yeremenko, O.S. and Fedosenko, H.P.

TITLE: Some results of the investigation of a ring grid

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut teploenerhetyky. Zbirnyk prats'.. no. 24, 1962. Teploobmin ta hidrodynamika, 86-90

TEXT: The grid was studied in 9 sections along the height of the channel between the blades, with $M = 0.5$ and 0.8 . The distance from the outlet edge plane to the point of measurement was 4.5 and 9 mm. Graphs of the variation of flow parameters, of the velocity coefficient and the stream outlet angle vs. channel height, pressure distribution along the profile (in the sections III, V, VI) and flow charts are given. $M = 0.5$ has better efficiency than $M = 0.8$. There are 4 figures.

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S/526/62/000/024/008/013
D234/D308

AUTHORS: Virozub, I.O., Horbatyy, Yu.P., Yeremenko, O.S. and Fedosenko, H.P.

TITLE: Aerodynamic investigations of a turbine stage with relatively short blades under varying operating conditions

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut teploenerhetyky. Zbirnyk prats'. no. 24, 1962. Teploobmin ta hidrodynamika, 91-97

TEXT: The ratio of mean diameter to blade length in the working wheel was 10.38. The flow parameters were measured before the first directional device, in the gap between it and the working wheel, and behind the working wheel, in seven sections along the channel heights. The air flow rate was constant for different numbers of revolutions. The full pressure remains nearly constant in the core of the stream and drops sharply near the outlet edge. The velocity of rotation did not affect the efficiency of the direction-

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Aerodynamic investigations ...

S/526/62/000/024/008/013
D234/D308

al grid. The outlet angles decrease with increasing velocity coefficient. Energy losses are greatest near the blade ends. In the channels of the working wheel a considerable part of the working substance flows from the root towards the end, especially when the velocity of rotation increases. The experimental increase of the axial component of velocity is much larger than the calculated one. The rate of flow through different sections of a thin cylindrical layer of the working substance is not constant. There are 9 figures and 1 table.

Card 2/2

VOLOSHIN, A.I.; VIROZUB, I.V.; KAZMINA, V.V.; KURBATOVA, M.Yu.

Determination of the heat of carbonization under laboratory
conditions. Koks i khim. no.3:19-23 '62. (MIRA 15:3)

1. Ukrainskiy uglekhimicheskiy institut.
(Coal—Carbonization)

VIROZUB, I.Ye. [Virozub, I.O.]

Relationship of the numbers Nu and Re in lateral lamina
gas flow about a cylinder. Zbir.prats' Inst. tepl.AN USSR
no.18:107-110 '60. (MIRA 14:12)
(Laminar flow)

VODNEV, G.G.; SHELKOV, A.K.; DIDENKO, V.Ye.; FILIPPOV, B.S.; TSAREV, M.N.;
ZASHVARA, V.G.; LITVINENKO, M.S.; MEDVEDEV, K.P.; MOLODTSCV, I.G.;
LGALOV, K.I.; RUBIN, P.G.; SAPOZHNIKOV, L.M.; TYUTYUNNIKOV, G.N.;
DMITRIYEV, M.M.; LEYTES, V.A.; LERNER, B.Z.; MEDVEDEV, S.M.; REVIYAKIN,
A.A.; TAYCHER, M.M.; TSOGLIN, M.E.; DVORIN, S.S.; RAK, A.I.; OBUKHOV-
SKIY, Ya.M.; KOTKIN, A.M.; ARONOV, S.G.; VOLOSHIN, A.I.; VIROZUB, Ye.V.;
SHVARTS, S.A.; GINSBURG, Ya.Ye.; KOLYANDR, L.Ya.; BELETSKAYA, A.Y.;
KUSHNEREVICH, N.R.; BRODOVICH, A.I.; NOSALEVICH, I.M.; SHTROMBERG, B.I.;
MIROSHNICHENKO, A.M.; KOPELIOVICH, V.M.; TOPORKOV, V.Ya.; AFONIN, K.B.;
GOFTMAN, M.V.; SEMENENKO, D.P.; IVANOV, Ye.B.; PEYSAKHZON, I.B.;
KULAKOV, N.K.; IZRAELIT, E.M.; KVASHA, A.S.; KAPTAN, S.I.; CHERMNYKH,
M.S.; SHAPIRO, A.I.; KHALABUZAR', G.S.; SEKT, P.Ye.; GABAY, L.I.;
SMUL'SON, A.S.

Boris Iosifovich Kustov; obituary. Koks i khim. no.2:64 '55.(MLRA 9:3)
(Kustov, Boris Iosifovich, 1910-1955)

18

CO

Copper-graphite mass for the manufacture of brushes for electric machines. J. Kh. Vitrak. Russ. 32,014, Oct. 31, 1933. To the soln. of Cu salt from which Cu is pptd. by Zn, H₂SO₄ is added for the purpose of saving materials, only after the introduction into the soln. of the Cu salt of a liquid mass of the reducing agent.

ASB. S. L. A. METALLURGICAL LITERATURE CLASSIFICATION

REGION: SIVIRSKAYA

REGION: BOMBY

REGION: SIVIRSKAYA

REGION: BOMBY

VIRNOVSKIY, A. S.

Theory and Methods of Evaluation of Measurements

Dissertation: "Investigation of Deep-Pumping Equipment for Oil Wells." Dr. Tech
Sci, Inst of Petroleum, Acad Sci USSR, Oct-Dec 1953. (Brief summary given.)
(Vestnik Akademii Nauk Moscow, Mar 54)

SO: SUM 213, 20 Sep 1954

Virnovskiy, A. S.

93-5-6/19

AUTHOR: Krylov, A. P., Borisov, Yu. P., Buchin, A. N.,
Virnovskiy, A. S., Rozenberg, M. D., Efros, D. A.

TITLE: Feasibility of Raising Production and Lowering Capital
Expenditures in the Development of Oil Fields
(O vozmozhnosti povysheniya dobychi i snizheniya
kapital'nykh zatrat pri razrabotke neftyanykh
mestorozhdeniy)

PERIODICAL: Neftyanoye Khozyaystvo, 1957, Nr 5, pp. 21-30 (USSR)

ABSTRACT: The article attempts to justify a method of intensifying
the exploitation of oil deposits by lowering the bottom
hole pressure of the producing wells and increasing the
pressure of the injection wells. In eastern oil fields
the intensity of the bottom hole pressure in producing
wells was determined by two conditions, namely, that the
separation of gas from oil in the formation be prevented
and that a free-flow production be maintained. Research
work conducted by the VNIIG (All-Union Scientific Research
Institute) and the Petroleum Institute of the AN SSSR as

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Feasibility of Raising Production and Lowering Capital 93-5-6/19
(Cont.)

well as that conducted abroad lead to the conclusion that when the mixture of oil and gas are driven by water the oil production would not be lower than that obtained in the absence of free gas in the formation. There are some grounds for believing that by lowering the formation pressure below the saturation pressure it will be possible not only to maintain the same rate of oil flow from the formation but also to increase it. Periodical and experimental work conducted in recent years by the VNII and other research organizations confirmed the above mentioned proposition. In 1953, an Ufa Scientific Research Institute crew experimented with two wells in the Tyumazy oil fields, wherein the bottom hole pressure was kept below the saturation pressure, the formation pressure being higher than the saturation pressure. Electric submersible pumps were used to bring the oil to the surface. The oil produced amounted to 70-80 per cent of that obtained when the bottom hole pressure was higher than the saturation pressure. Another problem arises when the bottom hole pressure drops below the saturation pressure. Under such conditions paraffin may begin to form in the area surrounding the hole. The temperature and pressure ranges in oil fields of Bashkiriya

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Feasibility of Raising Production and Lowering Capital ^{93-5-6/19}
(Cont.)

and Tatariya are, however, high enough to prevent the formation of paraffin. With respect to the condition of keeping the production on a free-flow basis, the author states that the experience with the Tyumazy wells shows that, even if electric submersible pumps are used, the increase in cost is too insignificant (2-5 rubles per ton) to be of serious concern. The pressure differential between the pressure of the injection wells and the bottom hole pressure of the producing wells may be increased by raising the pressure of the injection wells. As a result the oil output increases but so does the cost of water and electric power and the number of injection wells. The lowering of the bottom hole pressure and the raising of the pressure of the injection wells have also their negative aspects. In order to evaluate the effectiveness of these measures, hydrodynamic and economic calculations have been made on the basis of concrete experiments. These were conducted at two different types of oil fields, namely: 1) Romashkinskiye and Tyumazy-type oil fields and 2) Zhirnoye-type oil fields. In the first case, a 19.8 x 6 km sector was taken. Injection wells were located

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(Cont.)

along straight lines lying on both sides of a given sector and at a distance of 750 m from it. The producing wells were located along straight lines equidistant from each other. Five variations are given as well as the characteristics of the oil field, e. g., thickness of the formation, porosity, viscosity of the oil, saturation pressure, etc. For each variation fifteen pressure combinations were taken so that overall 75 different combinations were analyzed. It was assumed that the viscosity of the oil and water were constant throughout the oil field. The elasticity of the formation and of the fluids was disregarded. When the injection well pressure was increased to 225 atm 33-70% of the water injected escaped into the surrounding formations without affecting the oil-bearing formation. By raising the injection pressure to 275 atm the water loss amounted to 40-76%. When the bottom hole pressure dropped below the saturation pressure, the increase in the viscosity of the oil and the decrease in the permeability of the formation caused by the separation of the gas from oil were taken into account. The oil output increased although not as fast as the pressure drop. Water loss called for more injection wells. In the second case (Zhirnoye oil fields),

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Feasibility of Raising Production and Lowering Capital ^{93-5-6/19}
(Cont.)

a 6 x 3 km sector was taken. The injection pressures were 106, 130 and 160 atm, each with four different bottom hole pressures, namely: 97, 75, 50 and 25 atm, the overall number of combinations being 12. Electric centrifugal submersible pumps, tubular goods and wires designed by the OKB (Office of Special Design), were used. In calculations, the cost of a producing well was taken to be 1 million rubles, that of an injection well 1.2 million rubles. Capital outlays for the organization and equipment varied depending on the number of producing wells, the volume of oil production, number of injection wells, quality and quantity of electric submersible pumps (En-250-800 and ~~Ayat~~ 3-150-600 types mentioned), etc. Current production outlays were calculated according to the standard accounting system. Servicing of one well with an electric submersible pump was taken to cost 10,000 rubles per annum. The cost of 1 kw-hr was taken to be 10 kop. The results of these calculations are shown in Fig. 3 (Romashinskiye oil fields) and Fig. 4 (Zhirmoye oil field). The diagram in Fig. 3 shows the dependence of the per ton cost of oil on the average annual level of production under

Card 5/7

Feasibility of Raising Production and Lowering Capital 93-5-6/19
(Cont.)

various operating conditions. The diagram in Fig. 4 shows that the intensification of the output within set limits can be accomplished expediently only by lowering the bottom hole pressure in the producing wells. In conclusion the author states that calculations conducted point to the expediency of increasing the difference between the injection well pressures and the bottom hole pressures of the producing wells. These measures, if carried through, increase the production and lower the capital investments required for the development of new oil fields. On the basis of these results, in planning a system for the development of an oil field one should consider patterns in which injection pressure would be increased in injection wells lying along a line splitting the oil field (center-to-edge flooding). The bottom hole pressure of the producing wells may be lowered but not below 25% of the saturation pressure. The expediency of further lowering of this pressure must be confirmed by laboratory tests. The Soviet industry must produce a wider assortment of electrical submersible pumps to meet various oil production requirements. More research work should be done in this field. There are four figures and eight references, three

Card 6/7

Feasibility of Raising Production and Lowering Capital ^{93-5-6/19}
(Cont.)
of which are Slavic.

AVAILABLE: Library of Congress

Card 7/7

Virnovskiy, A. S.

AID P - 281

Subject : USSR/Engineering

Card : 1/1

Author : Virnovskiy, A. S.

Title : Calculation of the true length of the plunger stroke of the depth pump

Periodical : Neft. Khoz., v. 32, #4, 32-36, Ap 1954

Abstract : The author analyses the motion of the long stem of the depth pump under conditions of natural and forced vibration. An equation is introduced for computation of the length of the stroke of the pump plunger connected with a long stem either of uniform or two-step diameter. Approximate theory is developed on the basis of an electrical model suitable for a depth of 2000 meters (6,560ft). Preliminary tests showed good agreement between theory and model experiments. 4 charts, 8 Russian ref. (1924-54)

Institution : None

Submitted : No date

VIRNOVSKIY, P. A.

AID P - 1667

Subject : USSR/Electricity

Card 1/1 Pub. 28 - 7/9

Authors : Virnovskiy, A. S. and Ivankov, P. A.

Title : Device which automatically switches off the electric motor of a walking beam depending on operation of deep pump

Periodical : Energ. byul., 2, 25-27, F 1955

Abstract : This paper was presented in a competition for suggestions on the more economical consumption of electric power. A relay switch is described which will cut off the electric drive of a walking beam when the oil level in the deep pump reaches a certain low point, and after a short interval switch on the drive again. The device and its operation is illustrated by 4 diagrams. The jury found 3 shortcomings in the proposed device, accepted it for further development, and awarded the authors third prize.

Institution: None

Submitted : No date

VIRNYA, D. F.

780.1
.V8

Ukrainskaya SSR; kratkiy istoriko ekonomicheskii ocherk (The Ukrainian SSR; Short Historical And Economic Outline) Moskva, Gospolitizdat, 1954.

181 p. illus., map.

At head of title: Akademiya Nauk Ukrainskoy SSR. Instytut Ekonomiky.

VIRNYK, D. F.

V. V. Bondarenko, D. F. Virnyk, I. N. Romanenko, M. N. Seredenko and V. P. Teplitskiy, all of the Institute of Economics, Ukrainian SSR Academy of Sciences.

"Essay on the Development of the National Economy of the Ukrainian SSR," (book).

SO: Pravda Ukrainy, 25 Nov 54

VIRO, S. E.

Nature and measurement of instability of porcelain mixes. A. I. Miklashevskii and S. E. Viro. Keram. Sbornik, No. 17, pp. 20-28 (1947).- Instability is defined. On the basis of theoretical assumptions it can be stated that instability of a porcelain mix is exhibited by colloidal phenomena which are linked to thixotropy. The instability of a ceramic plastic mix containing particles $\leq 1 \mu$ depends on the phenomenon of thixotropy and differs only by the greater concentration of the disperse phase, thus, the intervals of concentrations within which the instability of plastic materials and thixotropy appear overlap one another. Instability is measured by means of an "instabilometer" on which the cylindrical specimen (16 mm. in diameter and 20 mm. long) is subjected to vibration of a definite frequency and amplitude for 20 sec. The index of instability is the degree of deformation of the specimen in millimeters. Workable porcelain mixes can be divided into four groups depending on the degree of instability as shown by the index: (a) stable (8 to 9 mm.), (b) slightly unstable (9 to 10 mm.), (c) unstable (10 to 15 mm.), and (d) highly unstable (over 15 mm.) Measurements with many batches indicate that the instability is not a direct consequence of the alkalinity because thixotropic properties and instability were exhibited even for small values of alkalinity (near the mental point) determined by titration. An increase in alkalinity up to a certain limit increases the instability, but, after apparently passing an isoelectric point, the instability

(OVER)

VIRO, S. E.

USE OF BENTONITE CLAYS IN THE PRODUCTION OF PORCELAIN.
G. P. Filintsev and S. E. Viro. Keram. Sbornik, No. 17,
pp. 12-15 (1947). -- Bentonite clays of the Ogianlinsk de-
posits in the Turkmen S.S.R. are suitable for admixture to
porcelain mixes as a substitute for the Chasov-Yar and
Glukhov plastic clays. Table ware of high whiteness can be
obtained from a batch of the following composition: kaolin
37, feldspar 25, porcelain body 5, quartz 30, and bentonite
3%. In preparing slips for casting, the following additions
should be used: water 33 to 34%, 2cc. of tannate per 100
gm. of dry material, and soluble glass 0.1% (on anhydrous
basis). Equally good results are obtained by either casting
or plastic moulding.

B.Z.K.

VIAO, S. E.

Nature and measurement of instability of porcelain mixes. A. I. MUKLASHASEI AND S. E. VIAO. *Keramik. Sbornik*, No. 17, pp. 20-24 (1947). Instability is defined. On the basis of theoretical assumptions it can be stated that instability of a porcelain mix is exhibited by colloidal phenomena which are linked to thixotropy. The instability of a ceramic plastic mix containing particles <1 μ depends on the phenomenon of thixotropy and differs only by the greater concentration of the disperse phase, thus, the intervals of concentrations within which the instability of plastic materials and thixotropy appear overlap one another. Instability is measured by means of an "instabilometer" on which the cylindrical specimen (16 mm. in diameter and 20 mm. long) is subjected to vibration of a definite frequency and amplitude for 20 sec. The index of instability is the degree of deformation of the specimen in millimeters. Workable porcelain mixes can be divided into four groups depending on the degree of instability as shown by the index: (a) stable (8 to 9 mm.), (b) slightly unstable (9 to 10 mm.), (c) unstable (10 to 15 mm.), and (d) highly unstable (over 15 mm.). Measurements with many batches indicate that the instability is not a direct consequence of the alkalinity because thixotropic proper-

ties and instability were exhibited even for small values of alkalinity (near the neutral point) determined by titration. An increase in alkalinity up to a certain limit increases the instability, but, after apparently passing an isoelectric point, the instability is reduced. Variation of the moisture content within the limits allowable for a workable mix has no noticeable effect on the instability, a greater effect is exercised by concentration of the electrolyte, valence of the ions, and the hydrophilic state. Porcelain mix containing up to 24% kaolin with an instability index of 11 to 15 did not exhibit a noticeable instability, but kaolin with an index of over 15 produced distinct instability. This fact should be considered when increasing the kaolin content of a porcelain batch. In selecting electrolytes to overcome the instability, the Schulze-Hardy law is applicable. On the basis of technological and economic considerations gypsum should be used to overcome instability; consumption is about 0.3% by weight of the batch. Cf. "Instability" this issue. B.Z.K.

PR 9101

VIRNOSKI, A. S.

USSR/Petroleum - Well Drilling
Pumps

May 1947

"Determination of the Maximum Load on Underground
Deep-pump Equipment," A. S. Virnoski, 5 pp

"Neftyanoye Khozyaystvo" Vol 25, No 5

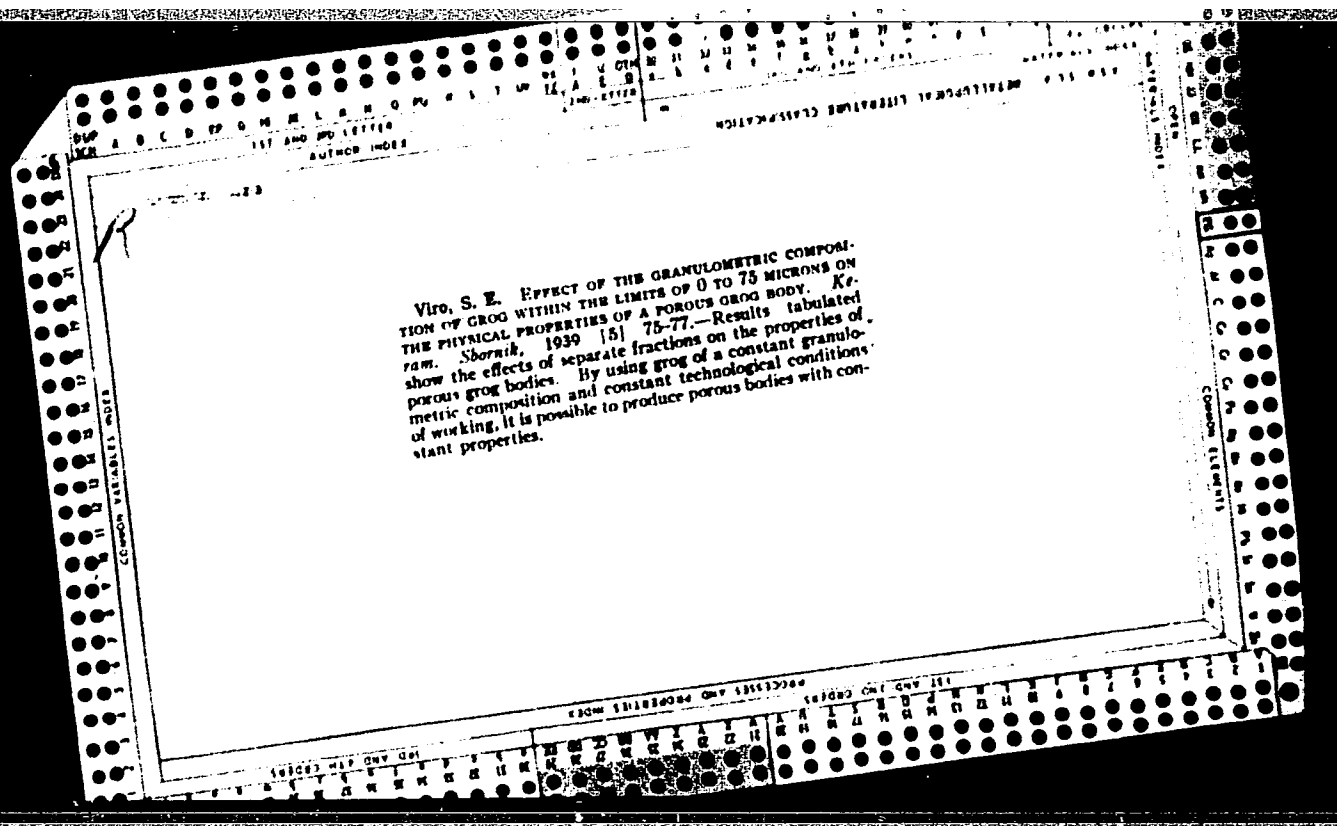
Mathematical treatment by formulas and graphs.
American formulas for determining loads found
inadequate.

9T81

18

Utilization of the waste products of lithopone production
for the preparation of barium chloride. G. O. Viro and
G. I. Shelinskii. Byull. L'khokraschochn. Promst. 1938, No.
12, 28-38; Khim. Referat. Zhur. 1939, No. 8, 101.—The
compn. of the waste products of lithopone production
which are left behind after the lixiviation of BaS with
water was investigated. Optimum conditions for the pro-
duction of BaCl₂ from these waste products were detd.
W. R. Henn.

ASB-36A METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND SIDES										3RD AND 4TH SIDES									
PROCESSES AND PROPERTIES INDEX																			
<p>CA</p> <p>19</p> <p>Use of bentonite clays in the production of porcelain. G. P. Filintsev and S. B. Viro, Kerm. Shovak No. 17, 12-18(1947).—Bentonite clays of the Oglaninsk deposits in the Turkmen S.S.R. are suitable for use in porcelain bodies as a substitute for Chasov-Yar and Glukhov plastic clays. Tableware of good white color was obtained from a batch contg.: kaolin 37, feldspar 25, porcelain body 5, quartz 30, and bentonite 3%. In prepg. slips for casting, the following addns. should be made: water 33-34%, 2 cc. of tannate per 100 g. of dry material, and Na silicate 0.1% (on anhyd. basis). Equally good results are ob- tained by either casting or plastic molding. B. Z. K.</p>																			
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION																			
FROM DIVISION										FROM DIVISION									
SUBJECT										SUBJECT									
AUTHOR										AUTHOR									
TITLE										TITLE									
DATE										DATE									
PAGE										PAGE									
VOLUME										VOLUME									
ISSUE										ISSUE									
SERIAL										SERIAL									
ENTRY										ENTRY									
REMARKS										REMARKS									

PROCESSING AND PROPERTIES INDEX									
<p>19</p> <p>Grinding ceramic materials in ball mills in a vacuum. S. E. Viro. <i>Keram. Sbornik</i> 1941, No. 18, 34-40.—A vacuum has practically no effect on the efficiency of grind- ing either dry or wet. M. V. Condole</p>									
<p>ASIA-ILA METALLURGICAL LITERATURE CLASSIFICATION</p>									
<p>FROM SOURCE</p>									
<p>TO SOURCE</p>									

1ST AND 2ND COVERS		PROCESS AND PROPERTIES INDEX		13-03-44	
<p>Nature and measurement of instability of porcelain mixes. A. I. MIKHAILEVICH AND S. E. VINOGRADOV. <i>Keram. Zhurnik</i>, No. 17, pp. 20-24 (1947). - Instability is defined. On the basis of theoretical assumptions it can be stated that instability of a porcelain mix is exhibited by colloidal phenomena which are linked to thixotropy. The instability of a ceramic plastic mix containing particles < 1 μ depends on the phenomenon of thixotropy and differs only by the greater concentration of the disperse phase, thus, the intervals of concentrations within which the instability of plastic materials and thixotropy appear overlap one another. Instability is measured by means of an "instabilometer" on which the cylindrical specimen (16 mm. in diameter and 20 mm. long) is subjected to vibration of a definite frequency and amplitude for 20 sec. The index of instability is the degree of deformation of the specimen in millimeters. Workable porcelain mixes can be divided into four groups depending on the degree of instability as shown by the index: (a) stable (8 to 9 mm.), (b) slightly unstable (9 to 10 mm.), (c) unstable (10 to 15 mm.), and (d) highly unstable (over 15 mm.). Measurements with many batches indicate that the instability is not a direct consequence of the alkalinity because thixotropic properties and instability were exhibited even for small values of alkalinity (near the neutral point) determined by titration. An increase in alkalinity up to a certain limit increases the instability, but, after apparently passing an isoelectric point, the instability is reduced. Variation of the moisture content within the limits allowable for a workable mix has no noticeable effect on the instability. A greater effect is exercised by concentration of the electrolyte, valence of the ions, and the hydrophilic state. Porcelain mix containing up to 24% kaolin with an instability index of 14 to 15 did not exhibit a noticeable instability, but kaolin with an index of over 15 produced distinct instability. This fact should be considered when increasing the kaolin content of a porcelain batch. In selecting electrolytes to overcome the instability, the Schulze-Hardy law is applicable. On the basis of technological and economic considerations gypsum should be used to overcome instability; consumption is about 0.3% by weight of the batch. Cf. "Instability" this issue. B. Z. K.</p>					
<p>ASS. S. L. A. METALLURGICAL LITERATURE CLASSIFICATION</p>					
<p>REGION: 65-1119</p>					
<p>651119 ONE ONLY 111</p>					
<p>651119 ONE ONLY 111</p>					

CA

Nature and measurement of the instability of porcelain mixes. A. I. Mikhlashevskii and S. P. Viro. *Kerama*, Moscow No. 17, 30-8 (1947). - On theoretical assumptions, the instability is exhibited by colloidal phenomena which are linked to thixotropy. The instability of a certain mix containing particles finer than 1 μ depends on the phenomenon of thixotropy and differs only by the greater coarseness of the disperse phase; thus, the intervals of coarseness within which the instability of plastic materials and the thixotropy appear, overlap one another. Instability is measured by an "instabliometer" on which the cylindrical specimen (16 mm. diam., 20 mm. long) is subjected to vibration of a definite frequency and amplitude for 20 sec. The index of instability is the degree of deformation of the specimen in mm. Workable porcelain mixes can be divided into 4 groups depending on the degree of instability as shown by the index: (a) stable, 8-9 mm.; (b) slightly unstable, 9-10 mm.; (c) unstable, 10-15 mm.; and (d) highly unstable, over 15 mm. Measurements on many batches indicate that instability is not a direct consequence of alkali, because thixotropic properties and instability were shown even for small values of alkali (near the neutral point), det'd. by titration. An increase in alkali, up to a certain limit increases the instability but, after apparently passing an isoelectric point, the instability is reduced. Variation in moisture content within the limits allowable for a workable mix has no noticeable effect on the instability. A greater effect is produced by the concn. of the electrolyte, valence of the ions, and the

hydrophilic state. A porcelain mix contg. up to 24% kaolin with an instability index of 14-15 did not show a noticeable instability, but kaolin with an index of over 15 produced distinct instability. This fact should be considered when increasing the kaolin content of a porcelain batch. In selecting electrolytes to overcome instability, the Schulze-Hardy law is applicable. Gypsum should be used (about 0.3% by wt. of the batch) to overcome instability.
B. Z. Kamich

A50-51.4 METALLURGICAL LITERATURE CLASSIFICATION

17

CA

Study of the effect of the granulometric composition of
 slag, within the limits of 0 to 75 microns, on the physical
 properties of a slag porous body. S. B. Yro. Kram.
 Zhurnal No. 5, 75-7 (1939).—By use of slag of const.
 granulometric compn. and const. working conditions, it is
 possible to produce porous bodies with const. properties
 M. V. Kondole

ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>USE OF BENTONITE CLAYS IN THE PRODUCTION OF PORCELAIN. G. P. Filintsev and S. E. Viro. <u>Kazem. Shornik</u>, No. 17, pp. 12-15 (1947). — Bentonite clays of the Ogianlinsk de- posits in the Turkmen S.S.R. are suitable for admixture to porcelain mixes as a substitute for the Chasov-Yar and Glukhov plastic clays. Table ware of high whiteness can be obtained from a batch of the following composition: kaolin 37, feldspar 25, porcelain body 5, quartz 30, and bentonite 3%. In preparing slips for casting, the following additions should be used: water 33 to 34%, 2cc. of tannate per 100 gm. of dry material, and soluble glass 0.1% (on anhydrous basis). Equally good results are obtained by either casting or plastic moulding. B.Z.K.</p>																			
<p>ASS-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

VIROVLYANSKIY, G.M.

Primary zonality in hydrothermal deposits. Zap. Vses. min. ob-va
83 no.3:234-240 '54. (MLRA 7:11)

1. Gosudarstvennyy Nauchno-issledovatel'skiy institut gorno-khimicheskogo syr'ya.
(Ore deposits)

VIROVLYANSKIY, G.M.

Photographic documentary observations in geological investigations. Zap.
(MLRA 6:11)
Vses.min.ob-va 82 no.3:225-227 '53.
(Photography--Scientific applications)

VIKNOVSKIY, A. S.

4T12

USSR/Oil Wells
Pumps

Feb 1947

"Determination of the Maximum Load of Bore-hole
Pumping Equipment on the Surface," A. S. Virnovskiy,
9 pp

"Neftyanoye Khoz'yaystvo" Vol XIV, No 2

Largely mathematical discussion of the law of
movement of a polished rod, the period of initial de-
formation when the end of the pumping tubes are free
and low, and stress on the polished rod at the end
of the period of initial deformation. First of two
installments.

4T12

USSR/Petroleum Industry

Sep 48

Pumps

"Test Results for Pump-Rockers With Combined Equalizers," A. S. Virnovskiy, O. S. Tateyevskiy, 6 pp

"Test No. 9

60/49T100

Equilibration of SKN-5 and SKN-3 pump-rockers with rotary counterweight during long strokes is related to the occurrence of negative tangent forces on the crankshaft, resulting in a weakening of the cotter and impacts in the reductor during unsatisfactory operation of reductors. These negative tangent forces are not eliminated entirely by transferring

60/49T100

END

USSR/Petroleum (Contd)

Sep 48

a part of the counterweight to the equalizer. The tested pump-rocker reductor must be designed for prolonged operation at varying moments of the shaft without any repairs. Gives four graphs of test results.

END

60/49T100

VIRNOVSKIY, A.S.

VIRNYK, D.F.

VIRNYK, D.F. Kompleksnoe narodnokhoz'iatvennoe ispol'zovanie vodnykh resursov
Donbassa. Kiev, 2N SSSR, 1940. 253 p. (Akademiia Nauk USSR. Institut ekonomiki...)
"Perechen'...literatury": p. 251-253.

DIC: HD169F.R0V5

CtY DA III

SO: IC, Soviet Geography, Part I, 1951, Uncl.

VIRNYK, D.F.

VIRNYK, D.F. Kompleksnoe narodnokhoziaistvennoe ispol'zovanie vodnykh resurov
Donbassa. Kiev, AN USSR, 1940. 253 p. (Akademiia Nauk USSR. Institut ekonomiki.)
"Perechen" ...literatury": p. 251-253.

CtY DA IN

DLC: HD1698.R9V5

SO: LC, Soviet Geography, Part I, 1951, Uncl.

VIRNYK, D.F.

VIRNYK, D.F. Kompleksnoe narodno-khoziaistvennoe ispol'zovanie vodnykh resursov Donbassa. Kiev, AN SSSR, 1940. 253 p. (Akademiia Nauk SSSR. Institut ekonomiki).

"Perechen' ... lit-ry": p. 251-253.

DLC: HD1698.R9V5

CtY DA NN
SO: LC, Soviet Geography, Part II, 1951/Unclassified

BC

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

100 AND 6TH ORDERS

B-7-2

Separation of normal methane hydrocarbons from straight-run gasoline. R. A. VANDERWANT and E. H. GILBERTSON (Inst. Chem., 1938, 25, 156-159).—The refining of straight-run fractions with H_2SO_4 and CH_3OH is described. CH. AB.

ASH-51A METALLURGICAL LITERATURE CLASSIFICATION

100 AND 6TH ORDERS

100 AND 6TH ORDERS

12

Method for the separation of aromatic hydrocarbons from straight-run gasoline and kerosenes. R. A. Viruhyants. *Neftyanoe Khimiyate* 25, 160-1 (1933). The fraction contg. aromatic compds. is treated with 97-99% H_2SO_4 (so as to give equal amts. by wt. of H_2SO_4 and hydrocarbons) and is agitated for at least 5 hrs. and settled for 6-8 hrs. About 90% of the aromatic compds. are extd. The acid sepd. from the gasoline is diluted with H_2O (1:1) and distd. with superheated steam, the hydrolysis starting at 140° . The temp. is then gradually raised to $200-210^\circ$. From 50 to 90% of the aromatic compds. are sepd., neutralized and dried. Consts. of the aromatic compds. are tabulated. A. A. Rohtlinek

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESS AND PROPERTIES INDEX																			
<p>CA</p> <p>Separation of normal methane hydrocarbons from straight-run gasolines. R. A. Virobyantz and S. M. Gahrielyantz. <i>Neftyanoe Khozaystvo</i> 25, 158 (1963). —</p> <p>9 For the sepn. of normal paraffins, the following gasolines were used: Maikop gasoline b. 65-70° for hexane; Grozny mixed-base gasoline b. 93-9° for heptane; Grozny mixed-base gasoline b. 122-7° for octane; Maikop gasoline b. 147-51° for nonane; and Maikop gasoline b. 171-7° for decane. The refining was carried out as follows: One l. of the fraction was treated for 0.5 hr. with 500 cc. of 98% H_2SO_4 for the removal of aromatic compounds, the acid sludge was settled for 0.5 hr. and the sludge sepd. The gasoline was then charged into a 2-l. round-bottomed flask on a water bath, and $ClSO_3H$ was introduced in small portions through a funnel. The bath temp. should be 66° for hexane and 80° for heptane, and it should be above 100-105° for octane, nonane and decane. The operation is carried out with const. agitation. The gases are passed through a 5-bulb reflux condenser, and a tower filled with pieces of broken glass tubes in countercurrent to water; the mixt. is collected in a receiver. The water is then siphoned from the receiver. The acid sludge is removed from the 2-l. flask and the substance collected in the receiver is added to the substance left in the flask. The mixt. is treated again but with an equal vol. of $ClSO_3H$. The treatment may be repeated if needed. The fraction is neutralized, washed, dried and distd. The S compounds are removed by treating the dry oil with sodium. The yields are 7-20%. The following consts. are given: b. p., sp. gr., n, crit. vol. in aniline, abs. viscosity and surface tension.</p> <p>22</p>																			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			

22

24

The influence of the chemical composition of kerosene on its burning properties in lamps. R. A. VIROBYANTZ AND P. A. SENTZOV. *Neflyanoe Khosyuliro* 22, 331-5

23, 91-6(1832).—Aniline points, photometrical tests, sp. gravities, ns, abs. viscosities at 20° and 50°, surface tensions at 15° (in dynes/sq. cm.), and pour points, were detd. on kerosenes of Russian origin. It is best to det. the chem. properties of kerosenes by the aniline point method, detns. are made before and after monohydrate treatment; photometrical tests require lamps of a certain standard; the construction of the various parts of the lamp is of great importance; Grozny kerosenes are classified as paraffin-base kerosenes. Methane hydrocarbons have the highest original illuminating properties, which are lowered in the course of burning, while aromatic hydrocarbons which have an original low illuminating power improve the latter during the burning process. Therefore, 10-20% of aromatics should be present in the kerosene when a uniform illuminating power is desired. Naphthenic acids, their salts and S compds. are detrimental and should be removed. A. A. BOKHILING

ASM-31A METALLURGICAL LITERATURE CLASSIFICATION

SECTION	SUBSECTION	CLASSIFICATION
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
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98	98	98
99	99	99
100	100	100

1ST AND 2ND COLUMNS

PROCESSING AND PROPERTY NOTES

72

CA

The use of cracked kerosene for tractor fuel. K. A. Virobyants, P. A. Kudryavtsev and Z. V. Veksler. *Neftyanoe Khozaystvo* 28, No. 3, 37-45 (1935). —Cracked kerosene from the Winkler-Korch unit in Baku, with 10% over below 200°, an end point of 300° and an octane no. of 40, is a suitable tractor fuel when treated with 1% of H_2SO_4 , redist., also, and blended with straight-run Baku kerosene. Maikop kerosene alone or blended with Baku cracked kerosene is unsuitable for tractor fuel.

A. A. Boerhlingk

COMMON ELEMENTS

COMMON VARIANTS MORE

OPEN MATERIALS MORE

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COLUMNS

3RD AND 4TH COLUMNS

5TH AND 6TH COLUMNS

7TH AND 8TH COLUMNS

9TH AND 10TH COLUMNS

11TH AND 12TH COLUMNS

13TH AND 14TH COLUMNS

15TH AND 16TH COLUMNS

17TH AND 18TH COLUMNS

19TH AND 20TH COLUMNS

21ST AND 22ND COLUMNS

23RD AND 24TH COLUMNS

25TH AND 26TH COLUMNS

27TH AND 28TH COLUMNS

29TH AND 30TH COLUMNS

31ST AND 32ND COLUMNS

33RD AND 34TH COLUMNS

35TH AND 36TH COLUMNS

37TH AND 38TH COLUMNS

39TH AND 40TH COLUMNS

41ST AND 42ND COLUMNS

43RD AND 44TH COLUMNS

45TH AND 46TH COLUMNS

47TH AND 48TH COLUMNS

49TH AND 50TH COLUMNS

51ST AND 52ND COLUMNS

53RD AND 54TH COLUMNS

55TH AND 56TH COLUMNS

57TH AND 58TH COLUMNS

59TH AND 60TH COLUMNS

61ST AND 62ND COLUMNS

63RD AND 64TH COLUMNS

65TH AND 66TH COLUMNS

67TH AND 68TH COLUMNS

69TH AND 70TH COLUMNS

71ST AND 72ND COLUMNS

73RD AND 74TH COLUMNS

75TH AND 76TH COLUMNS

77TH AND 78TH COLUMNS

79TH AND 80TH COLUMNS

81ST AND 82ND COLUMNS

83RD AND 84TH COLUMNS

85TH AND 86TH COLUMNS

87TH AND 88TH COLUMNS

89TH AND 90TH COLUMNS

91ST AND 92ND COLUMNS

93RD AND 94TH COLUMNS

95TH AND 96TH COLUMNS

97TH AND 98TH COLUMNS

99TH AND 100TH COLUMNS

BC

Separation of aromatic hydrocarbons from straight-run gasoline and kerosenes. R. A. VIGOR, *ANAL. (Met. Chem., 1955, 28, 160-161)*.—The fraction containing aromatic hydrocarbons (I) is treated with 97–99% H_2O_2 [wt. wt. (I)], heated for ≤ 5 hr., and settled for 6–8 hr. About 90% of the (I) are extracted. The separated acid is diluted with H_2O (1:1) and distilled with superheated steam, hydrolysis starting at 140° ; the temp. is then gradually raised to 200 – 210° . 80–90% of the aromatic compounds are separated. (Ch. Ans.

B II

ASAC-55A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CODES		3RD AND 4TH CODES		5TH AND 6TH CODES	
1845.	BACTERIAL OXIDATION OF PETROLEUM AND ITS MIGRATION IN NATURAL WATERCOURSES. Viroshilova, AA and Dianova, EV (Mikrobiologiya (Microbiology), 1950, vol. 19, 202-210).				
Oil pollution of river water is discussed, and the processes through which petroleum passes after discharge into a river are considered. Three main stages can be distinguished: (I) aerobid bacterial oxidation on the surface, (II) anaerobic bacterial oxidation on the river bed, to which the oil sinks after lighter fractions have been lost by evaporation and oxidation, and (III) further aerobic oxidation on surface, to which oil is carried by gas rising from river bed. Water is essentially for bacterial oxidation of petroleum, and such oxidation only occurs at oil/water interface. Presence of oil on water greatly increases (by a factor of up to 35) bacteria count in surface layers of the latter; figures for Moscow river and laboratory experiments are given. Gas rising from Moscow river varies from 150 ml (winter) to 2000 ml (summer) per m ² of river bed, such gas (largely CH ₄) carries with it up to 35 mg of oil per 100 ml. An aerobic oxidation of petroleum is largely carried out by denitrifying and desulphurizing					
METALLURGICAL LITERATURE CLASSIFICATION					
FROM BROWNY					

VIROVETS, A.M., prof.

Determining the most probable variations in the coordinates of points in certain special triangulations involving remeasurements. Izv. vys. ucheb. zav.;geod. i aerof. no.2:3-8 '62. (MIRA 15:9)

1. Moskovskiy institut inzhenerov geodesii, aerofotos"yemki i kartografii.

(Triangulation)

VIROVETS, A. M.

Author: Virovets, A. M.

Title: Tables for the transformation of rectangular coordinates; the transition from a three degree zone to a contiguous three degree zone, 2 from a three degree zone into a six zone and back in conformity with the accepted in the USSR zones. (Tablitsy dlia preobrazovaniia priamougol'nykh koordinat, perekhod iz trekhgradusnoi zony v smerzhniu i trekhgradusnoi v shestigradusnuu i obratno, primenitel'no k priinatykh v :SSR zonam) (128 p.

City: Moscow

Publisher: State Printing House of Geodesic and Cartographic Literature

Date: 1950

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 3, No. 6, Page 383

Call No: QA556.75

Subject: 1. Coordinates. 2. Mathematics--tables, etc.

VIROVETS, A. M.

Tablitsy dlya postroyeniya ramok trapetsiy topograficheskikh s'yemok
masshtabov 1:5000 i 1:2000 (Tables for plotting a frame for trapezoids of
topographical surveys, scales 1:5000 and 1:2000) Ellipsoid krasovskogo. Moskva,
Geodezizdat, 1951
259p. tables.

N/5
611.4
.v81

Virovets, A. M.

BAGRATUNI, G.V., dots, kand.tekhn.nauk; VIROVETS, A.M., prof., red.;
SHLENSKIY, I.A., tekhn.red.

[Manual and tables for solving direct and reverse geodetic problems
related to considerable distances based on A. M. Virovets's formulas]
Rukovodstvo i tablitsy dlia reshenia priamoi i obratnoi geodezicheskikh
zadach pri znachitel'nykh rasstoianiiakh po formulam A.M. Virovtsa.
Moskva, Izd-vo geodez. i kartograficheskoi lit-ry, 1952. 50 p.
(Leningrad, Tsentral'nyi nauchno-issledovatel'skii institut geodezii,
aeros"emki i kartografii. Trudy, no.93) (MIRA 10:12)
(Geodesy--Tables, etc.)

VIROVETS, A.M., professor; BARVENKO, Ye.I., inzhener; BENDOVSKIY, M.K., inzhener; GORELKIN, L.F., inzhener; DRIATSKAYA, E.M., inzhener; ZELICHENKO, L.B., inzhener; IVANOV, V.F., inzhener; KAMENSKIY, I.G., inzhener; KOSINOV, M.Ya., inzhener; LARIN, D.A., inzhener; MAURER, V. G. inzhener; NEMTSEV, S.V., inzhener; SOLOV'YEVA, M.V., inzhener; PISHKIN, V.N.; RYTOV, A.V., redaktor; SHLENSKIY, I.A., tekhnicheskii redaktor.

[Tables of the rectangular coordinates of map frame angles and of map frame and area dimensions of trapezoids of topographic surveys, using the scale 1:5000; for latitudes 36° - 68° . Krasovskii's ellipsoid] Tablitsy priamougol'nykh koordinat uglov ramok, razmerov ramok i ploshchadei; trapetsii topograficheskikh s'emok masshtaba 1:5000. Dlia shirot ot 36° - 68° . Ellipsoid Krasovskogo. Moskva, Izd-vo geodezicheskoi lit-ry, 1953. 909 P. (MIRA 8:4)
(Surveying--Tables, etc.) (Coordinates) (Trigonometry--Tables, etc.)

VIROVETS, A.M.; RABINOVICH, B.N.; KHRONCHENKO, F.I., redaktor; SHLENSKIY,
I.A., tekhnicheskiy redaktor

[Conversion tables for rectangular coordinates] Tablitsy dlia
preobrazovaniia priamougol'nykh koordinat. 3-e izd. Moskva, Izd-vo
geodesicheskoi lit-ry, 1954. 134 p. (MLRA 8:3)
(Coordinates)

SUDAKOV, S.G.; VIROVETS, A.M.; KURYTSIN, S.V.; PAVLOV, V.F.; PODOBEDOV, N.S.;
POPOV, V.A.; RYTOV, A.V.; SOKOLOVA, N.A.; SOKOLOV, M.N.; TROITSKIY,
B.V.; SHNEIDERMAN, E.S.

[Instructions for topographical surveying; scale 1:5000 and 1:2000]
Instruktsiia po topograficheskoi s^hemke v masshtabakh 1:5000 i 1:2000.
Moskva, Izd-vo geodezicheskoi lit-ry, 1955. 87 p. [Microfilm]
(MLRA 8:2)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i karto-
grafii.

(Topographical surveying)

VIRGILIS A. M.

VIRNOV, A. I.

AUTHOR: Bol'shakov, V. D., Candidate of Technical Sciences
 TITLES: Scientific and Technical Conference of NIICA i K (Machno-
 tekhnikheskaya konferentsiya NIICA i K)
 PERIODICALS: Izvestiya vreshnykh nauchnykh svedeniy, Geodesiya i
 aerofotoz'yemka, 1958, Nr. 2, pp 111-114 (USSR)

ABSTRACT: From April 24 to 26 a scientific and technical conference of the NIICA i K (Institute of Geodesy, Aerophotography, and Cartography, Moscow) was held in Moscow. Furthermore, there were four sections in operation on geodesy, aerophotogeodesy, cartography, and on the production of photogrammetrical instrum-
 ents. More than 500 delegates from 45 institutes took part in the conference at which 28 lectures were given. 20 delegates participated in the discussions. The opening speech was made by the Director of the NIICA i K, Professor P. S. Zakharov, Doctor of Technical Sciences. The first paper read was that by A. I. Virnov on "The Fight Against Revisionism." A. I. Virnov, Pro-
 fessor, Doctor of Technical Sciences, spoke on "The Setup and the Levelling Principles of the Geodetic Basic Network of the USSR." A. E. Litvinov, Professor, read a paper on "The Measure-
 ment of Quadrangular Coordinates in Some Kinds of Geodetical Stations on the Basis of the Data Directly Measured in the Ellipsoid." M. G. Litvinov, Doctor: "On a Bench Mark of Technical Stability." V. D. Bol'shakov, Doctor, Candidate of Technical Sciences, "The Life and Scientific Activity of D. P. Bolotov." V. B. Bol'shakov, "Optical Measuring Instruments Under Precise Conditions." M. V. Yakovlev, Assistant, "On the Methodology of High-Precision Cosinestry in First-Class Triangulations I." M. Ya. Bolshoi, "On the Problem of Determining Some Elements of Inner Orientation of Side-Angle and Super-
 Wide Angle Aerial Cameras." A. E. Zaynab, Graduate Student: "On a Level Device With a Freely Suspended Reflector." A. S. Dvornikov, Reported on "Geodesy and Cartography at the Begin-
 ning of the Soviet Rule." Ye. P. Arizmanov on "An Investigation of the Film Smoothing Device With Supporting Rollers." L. M. Vasilyev, Graduate Student, "Stereocomparator With Electrical Corrections." V. Ya. Mikhaylov, Doctor, Candidate of Technical Sciences: "On the Change of Scale of Aerial Photographs Result-
 ing from the Altering of the State of the Atmosphere." Ye. M. Kuznetsov, Graduate Student, "The Elements of the Theory of a New High-Speed Shutter." L. G. Litvinov, Doctor, Candidate of Technical Sciences: "On the Problem of the Theory of a State of Physical-Mathematical Knowledge in the Present
 Improving the Production of Measuring Tools." L. A. Malkin, Doctor, Candidate of Technical Sciences: "On Instruments for the Precise Measurement of Distances." V. S. Mikhaylov, As-
 sistant, "Field Tests With the Optical Range Finder CB-1." V. S. Usov, Assistant, "On the Study of Inaccuracies in the Recording Devices of Telescopes." M. M. Volkov, Professor, Doctor of Geographical Sciences: "Some Remarks on Engraving in the Production Process of Original Maps."

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Card 3/3

VIROVTS, A.M.

SOV/ 6-58-6-20/21

AUTHOR: None Given

TITLE: Chronicle (Khronika)

PERIODICAL: Geodeziya i kartografiya, 1958, Nr 6, pp. 78-79 (USSR)

ABSTRACT: From April 24 - 26, 1958, a scientific-technical conference took place at the Moscow Institute of Geodesy, Aerial Photography and Cartography Engineers (Moskovskiy institut inzhenerov geodezii, aerofotometyazheniya i kartografii). Besides the professors, teachers and students of the institute it was attended by following scientists: representatives of the production organizations, of the scientific research institutes and universities. P. S. Zakatov, Director of the Institute, opened the conference and communicated the results of the scientific research work carried out in the past year: he also spoke about the problems concerning the agenda. At the plenary sessions the following lectures were held: A. I. Ivanov, Docent: "Fighting Revisionism in the Present Stage". A. I. Durnev, Professor: "On the Construction and the Principles in Balancing the Principal Geodesic Network of the USSR". G. D. Rikhter, Professor, participant in the Antarctic expedition: "Oases of the Antarctic and the Charac-

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Chronicle

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teristic Features in Surveying".

At the sessions of the geodesic section the following lectures were held:

A. M. Virovets, Professor (or more probably: Virovets): "On the Evaluation in Rectangular Coordinates of Some Types of Geodesic Networks According to Directly Measured Data at the Ellipsoid". M. S. Murav'yev, Docent: "On Monuments of Especially High Stability". V. P. Kozlov, Candidate of Technical Sciences: "Calculation of the Approximative Weight Values of the Most Probable Values in Geodesic Networks". V. G. Selikhanovich, Docent: "The Life and Pedagogic-Scientific Activity of A. P. Bolotov". V. D. Bol'shakov, Candidate of Technical Sciences: "Optical Distance Measurement at Night". N. V. Yakovlev, Assistant: "On the Problems Concerning the Method Employed in the Precision Measurement of Angles in Municipal Triangulation of First Order". A. K. Pevnev, Aspirant: "On the Project of a Level With Freely Supported Mirror". Ye. I. Donskikh, Aspirant, Chief Engineer of the Geodesic Department in Building the Kuybyshev Water Power Central: "Triangulation of the Kuybyshev Water Power Central During Prospecting". A. S. Dmitriyev, Teacher: "Extracts From the

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Chronicle

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History of Geodesy and Cartography in the First Years of
Soviet Government (1917 - 1923)".

1. Cartography 2. Geodesics 3. Scientific reports

Card 3/3

BROVAR, Vsevolod Vladimirovich; MAGNITSKIY, Vladimir Aleksandrovich;
SHIMBIREV, Boris Pavlovich; YURKINA, M.I., retsenzent;
MAKAROV, N.P., retsenzent; VIROVTS, A.M., retsenzent;
VASIL'YEVA, V.I., red. izd-va; SENGUROV, V.S., tekhn. red.

[Theory of the earth's figure] Teoriia figury Zemli. Pod
obshchei red. V.A.Magnitskogo. Moskva, Izd-vo geodez. lit-ry,
1961. 256 p. (MIRA 15:3)
(Earth—Figure) (Gravity)

VIROVETS, A.M.; SHNEYDERMAN, E.S., red.; SHLENSKIY, I.A., tekhn.red.

[Tables for the construction of trapezoid frames of topographical surveys at scales of 1:1,500 and 1:2,000; Krasovskii's ellipsoid]
Tablitsy dlia postroeniia ramok trapetsii topograficheskikh
s"emok mashtabov 1:1500 i 1:2000; ellipsoid Krasovskogo. Moskva,
Izd-vo geodez. i kartograficheskoi lit-ry, 1951. 259 p.

(MIRA 14:1)

(Surveying--Tables, etc.)

PASYNSKIY, A.G.; VIROVETS, O.A.

Effect of ionizing radiation on the oxidation processes in tea leaves. Biokhim.chain.proizv. no.7:200-208 '59. (MIRA 13:5)

1. Institut biokhimii imeni A.N. Bakha AN SSSR, Moskva.
(RADIATION--PHYSIOLOGICAL EFFECT) (TEA) (OXIDATION, PHYSIOLOGICAL)

VIROVETS, O.A.; PASYNSKIY, A.G.

~~Effect~~ of ionizing radiations on oxidative processes in tea and tobacco leaves. Biokhimiia 24 no.5:922-928 S-O '59. (MIRA 13:2)

1. Institut biokhimii im. A.N. Bakha Akademii nauk SSSR, Moskva.
(PLANTS, EFFECT OF X RAYS ON) (OXIDATION, PHYSIOLOGICAL)
(TEA) (TOBACCO CURING)

PASINSKIY, A.G.; VIROVETS, O.A.

Enzymatic decomposition of urea under conditions of an open system.
Biokhimiia 26 no.2:332-337 Mr-Apr '61. (MIRA 14:5)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R.,
Moscow.

(UREA)

VIROVETS, O.A. (Moskva)

Quantitative determination of carboxyhemoglobin at various periods
following death in forensic medical practice. Sud.-med.ekspert. 5
no.4:23-27 O-D '62. (MIRA 15:11)
(CARBONYLHEMOGLOBIN) (FORENSIC HEMATOLOGY)

NESTERENKO, M.T.; VIROVETS, O.A.

Methodology for determining sialic acids. Lab. delo 10 no.4:195-
200 '64. (MIRA 17:5)

17 (3,10)
AUTHORS:

Virovets, O. A., Pasynskiy, A. G.

SOV/20-128-2-52/59

TITLE:

Effect of Ionizing Radiation on Oxidation Processes in
Leaves of Tea and Tobacco Plants

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 2, pp 407-410
(USSR)

ABSTRACT:

The oxidation processes of the tannins and polyphenol substances, as well as the glucosides, are of high importance in the fermentation of tea and tobacco, and greatly determine the quality of the end product. In a usual fermentation, the said processes are a consequence of the effect of various oxidation ferments (of the polyphenol oxidases, etc). Therefore, the possibilities for the influence of ionizing radiation were investigated, especially because they produce, in living cells, a large quantity of radiolysis products of the water - the radicals OH , O_2H and H_2O_2 - all of which are highly oxidizing agents. Thus, a direct oxidation of the substrata under the influence of radiation, as well as a change in the course of fermentative oxidation processes in plant leaves, could be expected. An X-ray irradiation was performed with dosages of

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.Effect of Ionizing Radiation on Oxidation Processes
in Leaves of Tea and Tobacco Plants

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5000 - 10,000 and 65,000 r/min, respectively. An electron irradiation was carried out at the Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry, AS USSR) with a dosage of 3 million r/min. Figures 1 and 2 show the dependence of the radiation effect on the duration and temperature of incubation after irradiation. Table 1 indicates the quantity of oxidized tannin (in %) produced in an incubation of different duration in air and nitrogen. Table 2 shows the effect of the electron bundle on tobacco leaves. The results of the present paper revealed that the tannin oxidation in an irradiated tea leaf is effected by ferments (Fig 1). It is, however, of essential importance that the accumulation of oxidized tannin-forms proceeds in an entire leaf irradiated whereas in the leaf not irradiated no oxidized tannin is present; it only begins to appear when the leaf is pulverized. From this, it is concluded that the ionizing radiation in the entire leaf effects a disturbance of the structural organization. This disturbance favors the contact of the ferment with the substratum, as it is the case in a mechanical destruction of the

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Effect of Ionizing Radiation on Oxidation Processes
in Leaves of Tea and Tobacco Plants

SOV/20-128-2-52/59

tissues. Similar conclusions were drawn from experiments with tobacco leaves (Table 2), although the oxidation processes here proceed more slowly due to a lower moisture during fermentation. At present, the practical utilization of these results is prevented by the deficiency of radiation sources which are strong enough. Professor M. A. Bokuchava and G. S. Il'in helped by giving valuable hints. There are 2 figures, 2 tables, and 3 Soviet references.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR
(Institute of Biochemistry imeni A. N. Bakh of the Academy of Sciences, USSR)

PRESENTED: May 27, 1959, by A. I. Oparin, Academician

SUBMITTED: May 25, 1959

Card 3/3

ACC NR: A10000000

SOURCE CODE: UR/0000/66/000/000/0217/0200

AUTHOR: Mirzoyev, B. M.; Milov, Yu. I.; Virovets, O. A.

ORG: none

TITLE: Effect of an acoustic shock wave on some humoral endocrine functions of the human organism [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); Materialy konferentsii, Moscow, 1966, 279-280

TOPIC TAGS: biologic effect, sonic boom, endocrinology, human physiology, pituitary gland, adrenal gland

ABSTRACT:

The cumulative effect of acoustic shocks (pulsed noise waves) was studied in two series of experiments with 12 and 14 human subjects, respectively. (Acoustic shock or sonic boom was imitated in laboratory conditions.) Subjects were exposed to acoustic shocks with an intensity of 7--7.5 kg/m² (first series) or 9--9.5 kg/m² (second series) with 10--15 min intervals between shocks. Acoustic shocks were administered daily for 5--6 days at the same time of day [total number of shocks not given].

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ACC NR: AT6036653

Physiological functions, including EEG, EKG, blood pressure, etc., were recorded prior to each acoustic shock and 1, 5, and 10 min later. Sugar and corticosteroid levels in the blood were determined, as well as adrenaline, norepinephrine, creatinine, potassium, and sodium levels in the urine, both before and after each experiment.

Experimental results showed no reliable changes in the blood-sugar level after either individual or multiple acoustic shocks. A tendency to increase diuresis was noted on the first day of the first series of experiments; on the 5th day this tendency was reversed. In the second series, diuresis persisted throughout the experiment. More creatinine was excreted on the first day of the first series and less on the fifth day (corresponding to changes in diuresis). In the same subjects sodium excretion increased on the first day. However, in the second group there was only a tendency toward increased sodium excretion on the fifth day. Remaining indices, such as adrenaline and epinephrine levels, did not change significantly, indicating a lack of influence of acoustic shock at the given levels. However, it must be remembered that shifts in diuresis and in sodium and creatinine excretion in the first series (with acoustic shocks of lower intensity) were more pronounced than in the second group.

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ACC NR: AT6036653

Corticosteroid analysis showed no basic change in the first series (acoustic shock of 7--7.5 kg/m²). However, an increased corticosteroid level was observed throughout the second series (shock intensity of 9--9.5 kg/m²). These data indicate that certain levels of acoustic shock can activate the pituitary-adrenal system and render an unfavorable effect on the organism.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

VIROVETS, Yu.D.

The improved SLD-M geodimeter. Geod. i kart. no.8:10-14 Ag '65.
(MIRA 18:9)